

REPLY UNDER 37 C.F.R. § 1.116 -- EXPEDITED PROCEDURE -- TECHNOLOGY CENTER 2600

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended): A method for providing information to a pilot of a vehicle via a display, the method comprising the steps of:

- a) indicating a current attribute of said vehicle on said display;
- b) receiving a target attribute for said vehicle;
- c) determining a first capture initiation attribute, said first capture initiation attribute differing from said current attribute and corresponding to a point for said vehicle to initiate capture in order to obtain said target attribute from said current attribute;
- d) receiving a maximum permissible overshoot;
- e) determining a last capture initiation position such that said target position to be captured will be overshoot by no more than said maximum permissible overshoot, wherein the region between said first capture initiation position and said last capture initiation position forms a capture region; and
- df) displaying (i) said first capture initiation attribute on said display in conjunction with said current attribute of said vehicle and (ii) said capture region relative to said current vehicle position.

Claim 2 (original): The method of claim 1 wherein said first capture attribute is determined and displayed relative to said current attribute.

Claim 3 (original): The method of claim 1 wherein said first capture attribute is determined and displayed relative to said target attribute.

Claim 4 (original): The method of claim 1 wherein: said current attribute is the current position of said vehicle; said target attribute is a target position to be captured; and said first capture attribute is a first capture initiation position such that said target position will be captured.

REPLY UNDER 37 C.F.R. § 1.116 – EXPEDITED PROCEDURE – TECHNOLOGY CENTER 2600

Claim 5 (canceled).

Claim 6 (original): The method of claim 1 further comprising the steps of: a) computing a trajectory to said target attribute; and b) displaying said trajectory relative to said current attribute of said vehicle.

Claim 7 (currently amended): The method of claim [[5]] 1 further comprising the steps of: a) computing an overshoot region within which initiation of capture will result in overshoot of said target position to be captured by more than said maximum permissible overshoot; and b) displaying said overshoot region relative to said target position to be captured.

Claim 8 (currently amended): The method of claim [[5]] 1 further comprising the steps of: a) computing an overshoot region within which initiation of capture will result in overshoot of said target position to be captured by more than said maximum permissible overshoot; and b) displaying said overshoot region relative to said target position to be captured.

Claim 9 (original): The method of claim 7 wherein said target position is a path.

Claim 10 (original): The method of claim 9 wherein said position indicator is an altitude indicator, said current vehicle position is a current vehicle altitude, said first capture initiation position is a first capture initiation altitude, said last capture initiation position is a last capture initiation altitude, and said path is an increasing altitude path.

Claim 11 (original): The method of claim 9 wherein said position indicator is an altitude indicator, said current vehicle position is a current vehicle altitude, said target position is a target altitude, said first capture initiation position is a first capture initiation altitude, said last capture initiation position is a last capture initiation altitude, and said path is a decreasing altitude path.

Claim 12 (original): The method of claim 7 wherein said position indicator is an altitude indicator, said current vehicle position is a current vehicle altitude, said target position is a target

REPLY UNDER 37 C.F.R. § 1.116 – EXPEDITED PROCEDURE – TECHNOLOGY CENTER 2600

altitude, said first capture initiation position is a first capture initiation altitude, said last capture initiation position is a last capture initiation altitude, and said target position is an assigned altitude.

Claim 13 (original): The method of claim 12 wherein said first capture initiation altitude is a function of vertical speed error and is proportional to $\frac{E_{vs} \cdot |E_{vs}|}{2 \cdot C \cdot g}$.

Claim 14 (original): The method of claim 12 wherein said vehicle is an aircraft.

Claim 15 (original): The method of claim 12 wherein the altitude indicator is an altitude tape.

Claim 16 (original): The method of claim 12 wherein the permissible overshoot is 250 feet.

Claim 17 (original): A digital storage medium having instructions stored thereon configured to execute the method of claim 12.

Claim 18 (currently amended): A digital storage medium having instructions stored thereon configured to execute the method of claim [[5]] 1.

Claim 19 (previously presented): A method for providing feedback comprising the steps of:

- a) providing an automated control system;
- b) providing an altitude tape;
- c) providing a target altitude;
- d) displaying on said altitude tape a current aircraft altitude;
- e) displaying on said altitude tape a target indicator representing said target altitude; and
- f) displaying on said altitude tape a path capture trajectory relative to said current aircraft altitude and corresponding to said target altitude indicator, said path capture trajectory including at least a first capture initiation altitude that differs from said current aircraft altitude,

REPLY UNDER 37 C.F.R. § 1.116 – EXPEDITED PROCEDURE – TECHNOLOGY CENTER 2600

wherein said path capture trajectory is determined by said automated control system.

Claim 20 (original): The method of claim 19 wherein said automated control system is an auto-pilot system.

Claim 21 (original): The method of claim 20 wherein said target altitude is a constant altitude.

Claim 22 (original): The method of claim 20 wherein said target altitude is defined by a path of ascending altitude.

Claim 23 (original): The method of claim 20 wherein said target altitude is defined by a path of descending altitude.

Claim 24 (original): The method of claim 20 wherein said target altitude is defined by a path computed as a function of vertical speed error.

Claim 25 (original): The method of claim 19 wherein the target indicator is a first icon, the current aircraft altitude is displayed by a second icon, and the path capture trajectory is displayed by a third icon.

Claim 26 (original): The method of claim 19 wherein the display screen is located in an aircraft.

Claim 27 (previously presented) A display for an aircraft comprising:

- a sliding scale altitude indicator;

- a target altitude indicator on said sliding scale altitude indicator configured to display a target altitude;

- a current altitude indicator on said sliding scale altitude indicator configured to display a current aircraft altitude;

- a capture region indicator on said on said sliding scale altitude indicator, said capture region indicator indicating at least an altitude, different from said current aircraft altitude, for initiating a capture of said target altitude; and

REPLY UNDER 37 C.F.R. § 1.116 – EXPEDITED PROCEDURE – TECHNOLOGY CENTER 2600

an overshoot region indicator on said sliding scale altitude indicator.

Claim 28 (original): The display of claim 27 wherein said target altitude indicator is displayed relative to said current altitude indicator and represents an assigned altitude.

Claim 29 (original): The display of claim 27 wherein said capture region indicator is displayed relative to said current altitude indicator and indicates the first and last points for initiating capture.

Claim 30 (original): The display of claim 27 wherein said capture region indicator is displayed relative to said target altitude indicator and indicates the first and last points for initiating capture.

Claim 31 (original): The display of claim 27 wherein said overshoot region indicator is displayed relative to said current altitude indicator and indicates a permissible range of overshoot.

Claim 32 (original): The display of claim 27 wherein said overshoot region indicator is displayed relative to said target altitude indicator and indicates a permissible range of overshoot.

Claim 33 (original): The display of claim 27 wherein said sliding scale altitude indicator is an altitude tape.